



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/780,751 | 02/19/2004 | Yoshiaki Nagashima | A8319.0034/P034 | 1787 |
| 24998 | 7590 | 12/05/2005 | EXAMINER | |
| DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP 2101 L Street, NW Washington, DC 20037 | | | CHAPMAN JR, JOHN E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2856 | |

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/780,751 | NAGASHIMA ET AL. | |
| | Examiner | Art Unit | |
| | John E. Chapman | 2856 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 November 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2,6,8,10-13 and 15-24 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 8,15-22 and 24 is/are allowed.
 6) Claim(s) 1,2,6,10-13 and 23 is/are rejected.
 7) Claim(s) 24 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. The disclosure is objected to because of the following informalities:

Page 23, lines 26-28, “such a waveform which is wanted to be received by a receiving element” is unclear.

Appropriate correction is required.

2. Claim 24 is objected to because of the following informalities:

In claim 24, “of” before “transmission” in line 16 should be deleted.

In claim 24, “from” should be inserted after “waveform” in line 18.

Appropriate correction is required.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 2, 6, 10, 11-13 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is unclear. It is not clear what it means for transmission waves to be formed “in such a manner that said calculated reception waveforms are sequentially transmitted from such a reception waveform in an order of degree that reception time is late.” It is noted that a method of forming a transmission waveform is described on pages 23-24 wherein a waveform “ $u(2d,t)$ ” is calculated on the basis of a reference waveform “ $u(t)$ ” and then time-inverted in accordance with

formula (4). However, it is not clear that the claim language reads upon the disclosed method. The waveform “ $u(2d,t)$ ” is not described as a “reception waveform of a reflection wave,” nor is there any apparent reception of the reference waveform “ $u(t)$ ” after a reflection, nor is there any apparent “order of a degree that reception time is late.”

Claims 2, 6, 10, 11-13 and 23 are unclear for the above reason.

5. Claims 8, 15-21, 22 and 24 are allowed.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Beffy et al. discloses a method and apparatus for detecting internal defects which uses time inversion to invert echo signals.

7. Applicant's arguments filed November 14, 2005 have been fully considered but they are not persuasive. Applicant argues that the cited reference does not disclose the subject matter of amended claims 1 and 12. However, as indicated above, the subject matter of amended claims 1 and 12 is not clear.

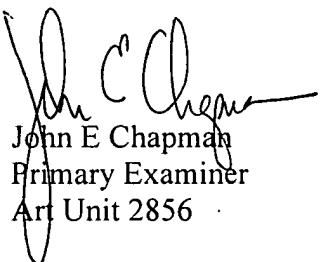
8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John E Chapman
Primary Examiner
Art Unit 2856